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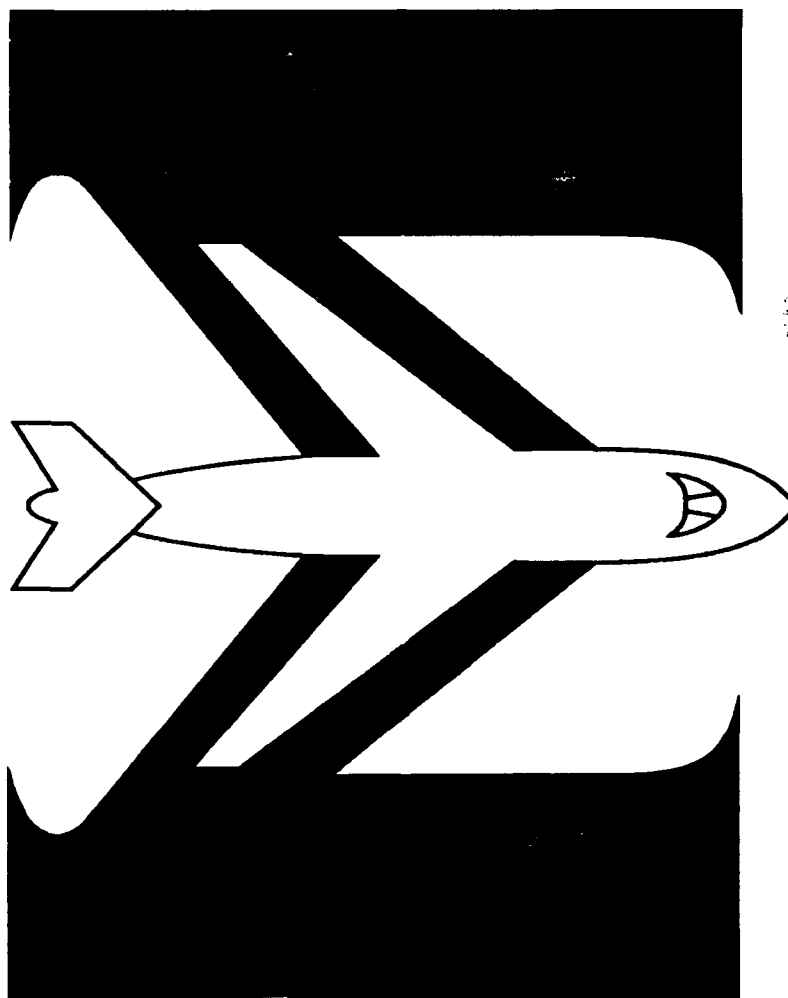
# U.S. CIVIL AIRMEN STATISTICS

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Calendar Year 1990



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**Airport Activity Statistics of Certificated Route Air Carriers** is a joint publication of the Federal Aviation Administration (FAA) and the Research & Special Programs Administration (RSPA). RSPA furnishes airport activity data on certificated route air carriers; FAA organizes/publishes it. Included in the data are passenger enplanements, tons of enplaned freight, express and mail. Both scheduled/nonscheduled service and domestic/international operations shown by airport and carrier are also included. Breakdown of data includes departures/enplanements/cargo/mail by airport, carrier & type of operation, and type of aircraft.

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Date next publication is available:	September 1991 (1990 data)
Person to contact:	Patricia Beardsley

**Census of U.S. Civil Aircraft** is an annual publication that includes statistical data on the registered civil fleet, air carrier aircraft, and general aviation aircraft—both registered and active, detailed reports for general aviation aircraft by owner's state and county, and registered aircraft by make and model.

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**FAA Air Traffic Activity** furnishes terminal and en route air traffic activity information (e.g., takeoffs & landings, flight plans filed) of the National Airspace System. The data is collected/compiled from the FAA-operated Airport Traffic Control Towers, Air Route Traffic Control Centers, Flight Service Stations, Approach Control Facilities, and FAA Contract-towered airports.

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Person to contact:	Nancy Trembley

**FAA Directory** is published twice a year, it contains six sections of data: Washington/Region/Center headquarters' managers; field facilities' managers/ supervisors; regional area maps/organizational charts; alphabetical listing; special interest groups; and glossary.

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Person to contact:	Steve Hopkins

**FAA Statistical Handbook of Aviation** is a convenient source for historical data. It presents statistical information pertaining to the Federal Aviation Administration, the National Airspace System, Airports, Airport Activity, U.S. Civil Air Carrier Fleet, U.S. Civil Air Carrier Operating Data, Airmen, General Aviation Aircraft, Aircraft Accidents, Aeronautical Production & Import/Export.

Latest edition:	Calendar Year 1989
Order from:	U.S. Government Printing Office or National Technical Information Service
Date 1990 information will be available:	Various
Date next publication is scheduled:	December 1991 (1990 Data)
Person to contact:	Patricia Beardsley

**General Aviation Activity and Avionics Survey** publication presents the results of the general aviation activity and avionics survey conducted to obtain information on the activity and avionics of the U.S. registered general aviation aircraft fleet. The survey reveals estimated flying time of the active general aviation and region of based aircraft, and primary use. Estimates are included on fuel consumption, lifetime airframe hours, avionics, and engine hours.

Latest edition:	Calendar Year 1989
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Date next publication is scheduled:	November 1991 (1990 data)
Person to contact:	Shung-Chai Huang

**General Aviation Pilot and Aircraft Activity Survey** includes data on the type and source of aircraft flight plan and weather information services, trip length in time and distance, pilot age and certification, estimates of total 1989 general aviation operations, fuel consumption and aircraft miles flown. The survey was conducted from June thru September 1990 by the Federal Aviation Administration with the assistance of the Civil Air Patrol.

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Person to contact:	Shung-Chai Huang

**Rotorcraft Activity Survey** presents the results of a special one-time survey. The report contains breakdowns of active rotorcraft, annual flight hours, average flight hours, and other statistics by rotorcraft type, manufacturer/model group, region and state of based aircraft, and primary use. Also included are law enforcement and public use rotorcraft, lifetime airframe hours, engine hours, estimated miles flown, and estimated number of landings.

Latest edition: Calendar Year 1989  
 Order from: Management Standards & Statistics Division, or  
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**U.S. Civil Airmen Statistics** is an annual study of detailed airmen statistics. It contains calendar year statistics on pilot and nonpilots and the number of certificates issued.

Latest edition: Calendar Year 1990  
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## **PREFACE**

The U.S. Civil Airmen Statistics is an annual study published to meet the demands of FAA, other government agencies, and industry for more detailed airmen statistics than those published in other FAA reports.

Statistics pertaining to airmen, both pilot and nonpilot, were obtained from the official airman certification records maintained at the FAA Aeronautical Center, Oklahoma City, Oklahoma.

An active Airmen is one who hold both an airmen certificate and a valid medical certificate. Airmen who must have a valid medical to exercise the privileges of their certificate are all airplane pilots; glider, flight navigators, and lighter-than-air pilots are not required to have a medical examination but the numbers represent only those who had a valid medical certificate. Mechanics, Parachute riggers, ground instructors, and dispatchers certificates represent all certificates on record at the Aeronautical Center.

This study was prepared in the Office of Management Systems, Management Standards and Statistics Division, Statistical Analysis Branch (AMS-420), by Patricia W. Carter.

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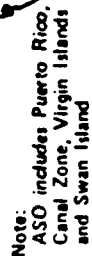
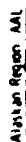
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### Includes Locations of Regional Headquarters and Centers



## **I. ACTIVE PILOT CERTIFICATES HELD**

**TABLE I**  
**ESTIMATED ACTIVE PILOT CERTIFICATES HELD**  
**DECEMBER 31, 1981 - 1990**

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<b>CATEGORY</b>										
<b>Pilot--Total</b>	<b>764,182</b>	<b>733,255</b>	<b>718,004</b>	<b>722,376</b>	<b>709,540</b>	<b>709,118</b>	<b>699,653</b>	<b>694,016</b>	<b>700,010</b>	<b>702,659</b>
Student	179,912	156,361	147,197	150,081	146,652	150,273	146,016	136,913	142,544	128,663
Private	328,562	322,034	318,643	320,086	311,086	305,736	300,949	299,786	293,179	299,111
Commercial	168,580	165,093	159,495	155,929	151,632	147,798	143,645	143,030	144,540	149,666
Airline Transport	70,311	73,471	75,938	79,192	82,740	87,186	91,287	96,968	102,087	107,732
Helicopter (only) 1/	6,453	7,034	7,237	7,532	8,123	8,581	8,702	8,608	8,863	9,567
Glider (only) 1/	7,388	7,842	8,157	8,390	8,168	8,411	7,901	7,600	7,708	7,833
Lighter-than-air 1/	2,976	1,360	1,337	1,166	1,139	1,133	1,153	1,111	1,089	2/
Recreational	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	87
<b>Nonpilot--Total r/</b>	<b>382,840</b>	<b>399,661</b>	<b>413,199</b>	<b>426,802</b>	<b>395,139</b>	<b>410,079</b>	<b>427,962</b>	<b>418,710</b>	<b>468,405</b>	<b>492,237</b>
Mechanic 3/	262,705	277,436	288,335	298,028	274,100	284,241	297,178	312,419	326,243	344,282
Parachute Rigger	9,716	9,893	10,074	10,194	9,395	9,535	9,659	9,770	9,879	10,094
Ground Instructor	63,246	65,004	66,385	67,463	58,214	59,443	60,861	62,582	64,503	66,882
Dispatcher 3/	7,094	7,580	8,223	8,980	8,511	9,025	9,491	10,020	10,455	11,002
Flight Navigator	1,785	1,695	1,636	1,603	1,542	1,512	1,445	1,400	1,357	1,290
Flight Engineer	38,294	38,053	38,546	40,534	43,377	46,323	49,328	52,519	55,968	58,687
Flight Instructor Certificates 4/	57,523	62,492	62,201	61,173	58,940	57,355	60,316	61,798	61,472	63,775
Instrument Rating	252,535	255,073	254,271	256,584	258,559	262,388	266,122	273,804	282,804	297,073

1/ Glider and lighter-than-air pilots are not required to have a medical examination; however, the totals above represent pilots who received a medical examination within the last 25 months.

2/ Lighter than air type ratings are no longer being issued.

3/ Numbers represent all certificates on record. No medical examination required.

4/ Not included in total.

5/ Special ratings shown on pilot certificates, do not indicate additional certificates.

r/ Revised 1981-1988.

N/A Not Available.

**TABLE 2**  
**ESTIMATED ACTIVE WOMEN CERTIFICATES HELD**  
**DECEMBER 31, 1981 - 1990**

CATEGORY	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<b>Pilot-Total</b>	<b>47,721</b>	<b>45,305</b>	<b>43,648</b>	<b>44,339</b>	<b>43,483</b>	<b>43,082</b>	<b>42,578</b>	<b>42,299</b>	<b>42,366</b>	<b>40,515</b>
Student	22,591	19,958	18,696	19,435	19,058	18,899	18,367	17,529	17,637	15,007
Private	19,602	19,388	18,801	18,616	17,974	17,532	17,349	17,544	16,988	17,301
Commercial	4,101	4,257	4,281	4,232	4,185	4,176	4,208	4,410	4,760	5,210
Airline Transport	334	749	884	1,032	1,184	1,334	1,538	1,745	1,898	2,082
Helicopter (only)	87	113	144	167	196	232	247	259	273	292
Glider (only) 1	540	574	599	631	653	667	627	590	586	617
Lighter-than-air 1	216	266	243	226	233	242	242	222	224	217
Recreational	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6
<b>Nonpilot-Total r/</b>	<b>5,701</b>	<b>5,697</b>	<b>6,151</b>	<b>6,591</b>	<b>6,017</b>	<b>6,502</b>	<b>7,101</b>	<b>7,842</b>	<b>10,683</b>	<b>9,557</b>
Mechanic 3	1,051	1,298	1,493	1,649	1,775	1,964	2,237	2,565	2,892	3,333
Parachute Rigger 3	580	593	605	614	412	414	428	441	451	474
Ground Instructor 3	3,213	3,391	3,554	3,680	2,980	3,087	3,232	3,391	3,354	3,760
Dispatcher 3	167	129	249	310	394	460	524	622	711	802
Flight Navigator	1	1	2	2	1	0	0	1	1	0
Flight Engineer	189	215	248	336	455	577	680	822	3,074	1,188
Flight Instructor Certificates 4	2,165	2,532	2,685	2,736	2,731	2,687	2,909	3,018	3,074	3,239

1. Glider and lighter-than-air pilots are not required to have a medical examination; however, the totals above represent pilots who received a medical examination within the last 25 months.

2. Lighter-than-air type rating is no longer being issued.

3. Numbers represent all certificates on record. No medical examination required.

4. Not included in total.

r. Revised.

N/A Not Available.

**TABLE 3**  
**ESTIMATED ACTIVE PILOT AND NONPILOT CERTIFICATES HELD**  
**BY CLASS OF CERTIFICATES AND BY FAA REGION**  
**DECEMBER 31, 1990**

CLASS OF CERTIFICATE	Total 1/	Alaskan	Central	Eastern	Great Lakes	New England	Northwest Mountain	Southern	Southwest	Western-Pacific	Outside U.S. 2/
<b>Total-All Pilots</b>	<b>702,659</b>	<b>9,715</b>	<b>34,820</b>	<b>90,920</b>	<b>115,339</b>	<b>33,135</b>	<b>65,611</b>	<b>122,546</b>	<b>81,390</b>	<b>121,817</b>	<b>27,363</b>
<b>Student Pilots--Total</b>	<b>128,663</b>	<b>1,407</b>	<b>5,916</b>	<b>18,913</b>	<b>22,317</b>	<b>6,659</b>	<b>11,028</b>	<b>22,455</b>	<b>13,588</b>	<b>21,384</b>	<b>4,996</b>
<b>Private Pilots--Total</b>	<b>299,111</b>	<b>4,602</b>	<b>17,555</b>	<b>37,865</b>	<b>55,648</b>	<b>14,742</b>	<b>28,704</b>	<b>47,484</b>	<b>33,559</b>	<b>53,821</b>	<b>5,131</b>
Private Airplane (only)	288,035	4,458	17,096	36,229	54,238	14,234	27,597	45,518	32,405	51,596	4,664
Private Airplane, Private Glider	4,144	38	166	664	633	199	384	661	401	943	55
Private Airplane, Commercial Glider	841	3	21	181	123	63	104	87	77	175	7
Private Airplane, Private Gyroplane	22	0	2	2	6	2	2	1	4	3	0
Private Airplane, Private Helicopter	1,592	15	71	198	172	94	168	245	185	322	122
Private Airplane, Private Glider, Private Helicopter	67	0	1	15	9	6	4	7	6	13	6
Private Airplane, Commercial Helicopter	4,357	87	197	568	460	143	439	954	479	759	271
Private Airplane, Private Glider, Commercial Helicopter	36	1	1	6	4	1	6	5	1	7	4
Private Airplane, Commercial Glider, Commercial Helicopter	15	0	0	2	1	0	0	6	1	3	2
Private Airplane, Commercial Gyroplane, Commercial Helicopter	2	0	0	0	2	0	0	0	0	0	0
<b>Commercial Pilots--Total</b>	<b>149,666</b>	<b>2,481</b>	<b>7,137</b>	<b>18,392</b>	<b>21,968</b>	<b>6,030</b>	<b>13,739</b>	<b>27,072</b>	<b>18,743</b>	<b>24,998</b>	<b>9,106</b>
Commercial Airplane (only)	128,628	2,166	6,305	15,423	19,624	5,201	11,632	22,488	16,123	20,919	8,747
Commercial Airplane, Private Glider	2,081	25	94	326	295	77	233	370	221	422	18
Commercial Airplane, Commercial Glider	3,776	30	136	577	491	220	434	613	401	829	45
Commercial Airplane, Commercial Gyroplane, Commercial Glider	2	0	1	0	0	0	0	0	0	1	0
Commercial Airplane, Private Helicopter	348	6	11	51	56	15	31	56	34	74	14
Commercial Airplane, Commercial Glider, Private Helicopter	28	0	0	7	4	0	1	2	3	9	2
Commercial Airplane, Commercial Helicopter	14,036	242	562	1,891	1,410	475	1,323	3,400	1,883	2,583	267
Commercial Airplane, Private Glider, Commercial Helicopter	163	2	5	26	24	11	15	34	14	27	5
Commercial Airplane, Commercial Glider, Commercial Helicopter	543	7	20	88	52	29	61	98	59	123	6
Commercial Airplane, Commercial Helicopter, Commercial Gyroplane	20	1	1	2	3	0	3	3	0	5	2
Commercial Airplane, Commercial Gyroplane	31	2	1	1	7	2	5	6	4	3	0
Commercial Airplane, Commercial Gyroplane, Commercial Helicopter	10	0	1	0	2	0	1	2	1	3	0
Commercial Glider	10	0	1	0	2	0	1	2	1	3	0

**TABLE 3**  
**ESTIMATED ACTIVE PILOT AND NONPILOT CERTIFICATES HELD,**  
**BY CLASS OF CERTIFICATES AND BY FAA REGION**  
**DECEMBER 31, 1990**

CLASS OF CERTIFICATE	Total 1/	Alaskan	Central	Eastern	Great Lakes	New England	Northwest Mountain	Southern	Southwest	Western-Pacific	Outside U.S. 2/
<b>Airline Transport Pilots--Total</b>	<b>107,732</b>	<b>1,097</b>	<b>3,744</b>	<b>12,659</b>	<b>13,623</b>	<b>4,757</b>	<b>10,673</b>	<b>22,549</b>	<b>13,795</b>	<b>17,758</b>	<b>7,077</b>
Airline Transport Airplane (only)	105,830	1,049	3,704	12,313	13,454	4,643	10,512	22,163	13,490	17,479	7,023
Airline Transport Airplane,											
Airline Transport Helicopter	1,902	48	40	346	169	114	161	386	305	279	54
<b>Rotorcraft (only) Pilots--Total</b>	<b>9,567</b>	<b>112</b>	<b>338</b>	<b>1,455</b>	<b>796</b>	<b>454</b>	<b>657</b>	<b>2,289</b>	<b>1,116</b>	<b>1,461</b>	<b>889</b>
Private Gyroplane	11	0	0	0	5	2	1	1	1	1	0
Private Helicopter	1,572	7	26	202	104	133	87	163	78	401	371
Commercial Helicopter	7,524	96	306	1,186	658	302	533	2,040	928	1,019	456
Commercial Helicopter, Private											
Glider	4	0	0	2	0	0	0	1	1	0	0
Commercial Helicopter, Commercial											
Glider	3	0	0	1	1	0	0	0	0	1	0
Commercial Gyroplane	2	0	0	0	1	0	0	0	1	0	0
Commercial Helicopter, Commercial											
Gyroplane	2	0	1	0	0	0	0	0	1	0	0
Airline Transport Helicopter	449	9	5	64	27	17	36	84	106	39	62
<b>Glider (only)--Total</b>	<b>7,833</b>	<b>15</b>	<b>124</b>	<b>1,617</b>	<b>965</b>	<b>486</b>	<b>805</b>	<b>685</b>	<b>587</b>	<b>2,387</b>	<b>162</b>
Private Glider	6,773	10	108	1,363	832	397	687	593	507	2,135	141
Commercial Glider	1,060	5	16	254	133	89	118	92	80	252	21
<b>Recreational Pilots</b>	<b>87</b>	<b>1</b>	<b>6</b>	<b>19</b>	<b>22</b>	<b>7</b>	<b>5</b>	<b>12</b>	<b>5</b>	<b>8</b>	<b>2</b>
<b>Nonpilots--Total</b>	<b>492,237</b>	<b>4,957</b>	<b>23,803</b>	<b>67,893</b>	<b>63,821</b>	<b>20,101</b>	<b>42,319</b>	<b>88,033</b>	<b>65,876</b>	<b>93,029</b>	<b>22,405</b>
Mechanic 3/	344,282	3,432	18,424	48,799	43,957	13,794	27,152	58,421	47,518	67,587	15,198
Parachute Rigger 3/	10,094	159	441	1,697	1,254	362	1,365	1,934	1,023	1,677	182
Ground Instructor 3/	66,882	771	3,273	9,091	10,420	2,878	6,140	11,736	8,754	11,945	1,874
Dispatcher 3/	11,002	194	163	2,121	1,122	281	569	2,070	886	1,516	2,080
Flight Navigator	1,290	6	9	205	35	146	139	234	75	368	73
Flight Engineer	58,687	395	1,493	5,980	7,033	2,640	6,954	13,638	7,620	9,936	2,998
<b>Flight Instructor Certificates--Total 4/</b>	<b>63,775</b>	<b>732</b>	<b>3,206</b>	<b>9,033</b>	<b>10,993</b>	<b>2,914</b>	<b>6,223</b>	<b>11,053</b>	<b>7,775</b>	<b>10,436</b>	<b>1,410</b>
<b>Instrument Ratings 5/</b>	<b>297,073</b>	<b>3,610</b>	<b>13,062</b>	<b>37,904</b>	<b>44,034</b>	<b>13,036</b>	<b>27,110</b>	<b>57,676</b>	<b>36,516</b>	<b>49,700</b>	<b>14,425</b>

1/ Includes Outside U.S. total.

2/ Outside U.S. includes airmen certificated by the FAA who live outside the 50 states or foreign countries.

3/ Total ratings issued to date. These ratings retain their validity without periodic medical examinations.

4/ Not included in total.

5/ Special ratings shown on pilot certificates, do not indicate additional ratings.

**TABLE 4**  
**ESTIMATED ACTIVE PILOTS AND FLIGHT INSTRUCTORS**  
**BY FAA REGION AND STATE**  
**DECEMBER 31, 1990**

FAA REGION AND STATE	Total Pilots	Students	Private	Commercial	Airline Transport	Misc. 2/	Flight Instructor 3/
<b>Total</b>	<b>702,659</b>	<b>128,663</b>	<b>299,111</b>	<b>149,666</b>	<b>107,732</b>	<b>17,487</b>	<b>63,775</b>
<b>United States--Total</b>	<b>675,296</b>	<b>123,667</b>	<b>293,980</b>	<b>140,560</b>	<b>100,655</b>	<b>16,434</b>	<b>62,365</b>
<b>Alaskan Region--Total</b>	<b>9,715</b>	<b>1,407</b>	<b>4,602</b>	<b>2,481</b>	<b>1,097</b>	<b>128</b>	<b>732</b>
<b>Central Region--Total</b>	<b>34,820</b>	<b>5,916</b>	<b>17,555</b>	<b>7,137</b>	<b>3,744</b>	<b>468</b>	<b>3,206</b>
Iowa	7,334	1,283	4,056	1,432	478	85	638
Kansas	9,426	1,496	4,774	2,035	322	129	877
Missouri	13,057	2,283	6,189	2,496	1,871	218	1,296
Nebraska	5,003	854	2,536	1,174	403	36	395
<b>Eastern Region--Total</b>	<b>90,920</b>	<b>18,913</b>	<b>37,865</b>	<b>18,392</b>	<b>12,659</b>	<b>3,091</b>	<b>9,033</b>
Delaware	1,737	335	709	364	295	34	200
District of Columbia	569	116	248	135	41	29	55
Maryland	10,082	1,961	4,483	2,001	1,347	290	964
New Jersey	14,375	3,021	5,974	2,615	2,246	519	1,434
New York	24,599	5,594	10,473	4,921	2,491	1,120	2,319
Pennsylvania	21,413	4,481	9,185	3,931	3,211	605	2,331
Virginia	15,641	2,844	5,578	3,935	2,847	437	1,506
West Virginia	2,504	561	1,215	490	181	57	224
<b>Great Lakes Region--Total</b>	<b>115,339</b>	<b>22,317</b>	<b>55,648</b>	<b>21,968</b>	<b>13,623</b>	<b>1,783</b>	<b>10,993</b>
Illinois	26,271	4,985	11,946	4,876	4,019	445	2,744
Indiana	12,596	2,614	6,229	2,410	1,184	159	1,180
Michigan	19,958	4,106	9,946	3,558	1,948	400	1,843
Minnesota	16,966	3,067	7,854	3,287	2,561	197	1,504
North Dakota	3,277	600	1,628	906	126	17	291
Ohio	21,755	4,101	10,631	4,213	2,381	429	2,184
South Dakota	2,513	438	1,233	614	209	19	216
Wisconsin	12,003	2,406	6,181	2,104	1,195	117	1,031
<b>New England Region--Total</b>	<b>33,135</b>	<b>6,659</b>	<b>14,742</b>	<b>6,030</b>	<b>4,757</b>	<b>947</b>	<b>2,914</b>
Connecticut	8,643	1,573	3,500	1,551	1,777	242	771
Maine	3,877	828	1,807	824	355	63	296
Massachusetts	12,407	2,726	5,935	2,139	1,192	415	1,087
New Hampshire	4,793	832	1,941	866	1,026	128	470
Rhode Island	1,585	330	743	303	175	34	117
Vermont	1,830	370	816	347	232	65	173
<b>Northwest Mountain Region--Total</b>	<b>65,611</b>	<b>11,028</b>	<b>28,704</b>	<b>13,739</b>	<b>10,673</b>	<b>1,467</b>	<b>6,223</b>
Colorado	16,484	2,454	6,325	3,566	3,649	490	1,940
Idaho	4,367	685	2,181	972	457	72	378
Montana	3,842	626	1,939	926	314	37	356
Oregon	10,429	1,832	5,429	2,127	825	216	900
Utah	6,000	1,231	2,560	1,053	1,037	119	490
Washington	22,548	3,904	9,205	4,723	4,214	502	1,993
Wyoming	1,941	296	1,065	372	177	31	166

**TABLE 4**  
**ESTIMATED ACTIVE PILOTS AND FLIGHT INSTRUCTORS**  
**BY FAA REGION AND STATE**  
**DECEMBER 31, 1990**

FAA REGION AND STATE	Total Pilots	Students	Private	Commercial	Airline Transport	Misc. 2/	Flight Instructor 3/
<b>Southern Region--Total</b>	<b>122,546</b>	<b>22,455</b>	<b>47,484</b>	<b>27,072</b>	<b>22,549</b>	<b>2,986</b>	<b>11,053</b>
Alabama	9,256	1,714	3,760	2,240	784	758	883
Florida	48,500	8,470	18,491	11,502	9,172	865	4,561
Georgia	18,827	3,145	6,636	3,732	4,952	362	1,505
Kentucky	6,041	1,214	2,528	1,047	1,116	136	568
Mississippi	4,695	939	1,886	1,386	388	96	395
North Carolina	15,574	2,984	6,396	3,126	2,676	392	1,244
South Carolina	7,060	1,534	2,926	1,654	817	129	592
Tennessee	12,593	2,455	4,861	2,385	2,644	248	1,305
<b>Southwest Region--Total</b>	<b>81,393</b>	<b>13,588</b>	<b>33,559</b>	<b>18,743</b>	<b>13,795</b>	<b>1,708</b>	<b>7,775</b>
Arkansas	5,990	1,132	2,646	1,615	525	72	502
Louisiana	7,969	1,448	3,109	2,153	957	302	730
New Mexico	4,897	817	2,133	1,249	564	134	527
Oklahoma	10,702	1,963	5,234	2,352	1,017	136	955
Texas	51,835	8,228	20,437	11,374	10,732	1,064	5,061
<b>Western-Pacific Region--Total</b>	<b>121,817</b>	<b>21,384</b>	<b>53,821</b>	<b>24,998</b>	<b>17,758</b>	<b>3,856</b>	<b>10,436</b>
Arizona	16,219	2,983	6,613	3,520	2,599	504	1,669
California	96,656	16,935	44,120	19,542	13,087	2,972	7,923
Hawaii	3,505	696	893	835	853	228	309
Nevada	5,437	770	2,195	1,101	1,219	152	535
<b>Outside U. S. --Total 4/</b>	<b>27,363</b>	<b>4,996</b>	<b>5,131</b>	<b>9,106</b>	<b>7,077</b>	<b>1,053</b>	<b>1,410</b>
<b>Other U. S. Areas:</b>	<b>2,063</b>	<b>615</b>	<b>664</b>	<b>358</b>	<b>370</b>	<b>56</b>	<b>0</b>
American Samoa	10	1	2	1	5	1	0
Canal Zone	2	0	0	1	1	0	0
Guam	146	20	29	18	73	6	0
Puerto Rico	1,628	530	542	275	236	45	0
Virgin Island	276	64	91	62	55	4	0
Wake Island	1	0	0	1	0	0	0

1/ Includes Outside U.S.

2/ Includes helicopter, glider, and recreational. Lighter-than-air type rating is no longer being issued.

3/ Not included in total.

4/ Outside U.S. includes Other U.S. Areas outside of the 50 states and foreign countries.



**TABLE 5**  
**ESTIMATED ACTIVE WOMEN PILOTS AND FLIGHT INSTRUCTORS**  
**BY FAA REGION AND STATE**  
**DECEMBER 31, 1990**

FAA REGION AND STATE	Total Pilots	Students	Private	Commercial	Airline Transport	Misc. /2	Flight Instructor 3/
<b>Total 1/</b>	<b>40,515</b>	<b>15,007</b>	<b>17,301</b>	<b>5,210</b>	<b>2,082</b>	<b>915</b>	<b>3,239</b>
<b>United States--Total</b>	<b>39,599</b>	<b>14,691</b>	<b>17,022</b>	<b>4,977</b>	<b>2,039</b>	<b>870</b>	<b>3,179</b>
<b>Alaskan Region--Total</b>	<b>721</b>	<b>236</b>	<b>362</b>	<b>94</b>	<b>23</b>	<b>6</b>	<b>49</b>
<b>Central Region--Total</b>	<b>1,784</b>	<b>673</b>	<b>847</b>	<b>183</b>	<b>63</b>	<b>18</b>	<b>118</b>
Iowa	330	129	153	38	7	3	15
Kansas	486	173	243	43	20	7	32
Missouri	737	286	338	77	29	7	54
Nebraska	231	85	113	25	7	1	17
<b>Eastern Region--Total</b>	<b>5,489</b>	<b>2,132</b>	<b>2,219</b>	<b>689</b>	<b>270</b>	<b>179</b>	<b>475</b>
Delaware	92	34	35	13	7	3	11
District of Columbia	57	21	25	4	6	1	4
Maryland	690	257	321	59	36	17	44
New Jersey	857	375	306	111	39	26	73
New York	1,440	557	568	177	66	72	120
Pennsylvania	1,353	511	562	191	58	31	126
Virginia	878	324	353	120	56	25	92
West Virginia	122	53	49	14	2	4	5
<b>Great Lakes Region--Total</b>	<b>6,741</b>	<b>2,569</b>	<b>2,952</b>	<b>650</b>	<b>287</b>	<b>83</b>	<b>564</b>
Illinois	1,648	600	705	229	97	17	153
Indiana	681	270	284	92	29	6	63
Michigan	1,204	478	517	139	40	30	91
Minnesota	963	372	407	120	52	12	84
North Dakota	179	63	82	33	1	0	18
Ohio	1,263	451	595	157	44	16	107
South Dakota	97	33	47	12	4	1	5
Wisconsin	706	302	315	68	20	1	43
<b>New England Region--Total</b>	<b>2,115</b>	<b>811</b>	<b>896</b>	<b>237</b>	<b>111</b>	<b>60</b>	<b>164</b>
Connecticut	531	198	211	62	42	18	44
Maine	217	88	99	20	9	1	12
Massachusetts	810	326	347	89	32	16	62
New Hampshire	314	111	131	39	17	16	32
Rhode Island	110	37	52	15	4	2	5
Vermont	133	51	56	12	7	7	9
<b>Northwest Mountain Region--Total</b>	<b>4,211</b>	<b>1,449</b>	<b>1,838</b>	<b>584</b>	<b>240</b>	<b>100</b>	<b>353</b>
Colorado	1,175	388	440	212	95	40	140
Idaho	235	77	113	36	5	4	20
Montana	186	62	95	22	6	1	12
Oregon	714	248	358	71	22	15	51
Utah	275	111	110	29	18	7	15
Washington	1,516	532	657	203	91	33	111
Wyoming	110	31	65	11	3	0	4

**TABLE 5**  
**ESTIMATED ACTIVE WOMEN PILOTS AND FLIGHT INSTRUCTORS**  
**BY FAA REGION AND STATE**  
**DECEMBER 31, 1990**

FAA REGION AND STATE	Total Pilots	Students	Private	Commercial	Airline Transport	Misc. /2	Flight Instructor 3/
<b>Southern Region--Total</b>	<b>6,267</b>	<b>2,540</b>	<b>2,431</b>	<b>776</b>	<b>401</b>	<b>119</b>	<b>483</b>
Alabama	401	185	157	26	7	26	15
Florida	2,863	1,105	1,153	401	162	42	245
Georgia	804	346	307	87	53	11	51
Kentucky	276	111	92	35	35	3	25
Mississippi	202	83	80	25	10	4	16
North Carolina	762	306	301	90	48	17	65
South Carolina	320	147	111	41	15	6	21
Tennessee	639	257	230	71	71	10	45
<b>Southwest Region--Total</b>	<b>4,049</b>	<b>1,500</b>	<b>1,767</b>	<b>508</b>	<b>211</b>	<b>63</b>	<b>324</b>
Arkansas	263	106	121	31	3	2	14
Louisiana	301	128	115	44	10	4	29
New Mexico	322	121	125	46	18	12	36
Oklahoma	617	227	288	70	27	5	49
Texas	2,546	918	1,118	317	153	40	196
<b>Western-Pacific Region--Total</b>	<b>8,222</b>	<b>2,781</b>	<b>3,710</b>	<b>1,056</b>	<b>433</b>	<b>242</b>	<b>649</b>
Arizona	1,079	365	479	141	61	33	91
California	6,564	2,225	2,992	837	328	182	503
Hawaii	233	79	73	37	26	18	27
Nevada	346	112	166	41	18	9	28
<b>Outside U. S. --Total 4/</b>	<b>916</b>	<b>316</b>	<b>279</b>	<b>233</b>	<b>43</b>	<b>45</b>	<b>60</b>
<b>Other U. S. Areas:</b>	<b>84</b>	<b>47</b>	<b>17</b>	<b>8</b>	<b>7</b>	<b>5</b>	<b>0</b>
American Samoa	0	0	0	0	0	0	0
Canal Zone	0	0	0	0	0	0	0
Guam	10	2	3	1	3	1	0
Puerto Rico	57	36	11	4	2	4	0
Virgin Island	17	9	3	3	2	0	0
Wake Island	0	0	0	0	0	0	0

1/ Includes Outside U.S.

2/ Includes helicopter, glider, and recreational pilots. Lighter-than-air type rating is no longer being issued.

3/ Not included in total.

4/ Outside U.S. includes Other U.S. Areas outside of the 50 states and foreign countries.

**TABLE 6**  
**ESTIMATED ACTIVE HELICOPTER PILOTS**  
**BY CLASS OF CERTIFICATES**  
**DECEMBER 31, 1990**

CLASS OF CERTIFICATE	Number of Certificates Held
<b>TOTAL</b>	<b>32,741</b>
Private Helicopter	1,572
Private Helicopter, Private Airplane	1,592
Private Helicopter, Private Airplane, Private Glider	67
Private Helicopter, Commercial Airplane	348
Private Helicopter, Commercial Airplane, Commercial Glider	28
Private Gyroplane	11
Private Gyroplane, Private Airplane	22
Commercial Helicopter	7,524
Commercial Helicopter, Private Airplane	4,357
Commercial Helicopter, Private Glider	4
Commercial Helicopter, Commercial Glider	3
Commercial Helicopter, Private Airplane, Commercial Gyroplane	2
Commercial Helicopter, Private Airplane, Private Glider	36
Commercial Helicopter, Private Airplane, Commercial Glider	15
Commercial Helicopter, Commercial Airplane	14,036
Commercial Helicopter, Commercial Airplane, Private Glider	163
Commercial Helicopter, Commercial Airplane, Commercial Glider	543
Commercial Gyroplane	2
Commercial Helicopter, Commercial Airplane, Commercial Gyroplane	20
Commercial Helicopter, Commercial Airplane, Commercial Gyroplane, Commercial Glider	10
Commercial Helicopter, Commercial Gyroplane	2
Commercial Gyroplane, Commercial Airplane	31
Commercial Gyroplane, Commercial Airplane, Commercial Glider	2
Airline Transport Helicopter	449
Airline Transport Airplane, Airline Transport Helicopter	1,902

**TABLE 7**  
**ESTIMATED ACTIVE GLIDER PILOTS**  
**BY CLASS OF CERTIFICATES**  
**DECEMBER 31, 1990**

CLASS OF CERTIFICATE	Number of Certificates Held
<b>Total</b>	<b>19,546</b>
Private Glider	6,773
Private Glider, Private Airplane	4,144
Private Glider, Private Airplane, Private Helicopter	67
Private Glider, Private Airplane, Commercial Helicopter	36
Private Glider, Commercial Airplane	2,081
Private Glider, Commercial Airplane, Commercial Helicopter	163
Private Glider, Commercial Helicopter	4
Commercial Glider	1,060
Commercial Glider, Commercial Airplane	3,776
Commercial Glider, Private Airplane	841
Commercial Glider, Private Airplane, Commercial Helicopter	15
Commercial Glider, Commercial Helicopter	3
Commercial Glider, Commercial Airplane, Private Helicopter	28
Commercial Glider, Commercial Airplane, Commercial Helicopter	543
Commercial Glider, Commercial Airplane, Commercial Gyroplane	2
Commercial Glider, Commercial Airplane, Commercial Gyroplane, Commercial Helicopter	10

**TABLE 8**  
**ESTIMATED ACTIVE HELICOPTER AND GLIDER PILOTS**  
**DECEMBER 31, 1986-1990**

Calendar Year	Total Helicopter Pilots 1/		Total Glider Pilots 2/	
	Number	Percent Change	Number	Percent Change
1990	32,741	3.6%	19,546	2.1%
1989	31,602	0.8%	19,149	0.3%
1988	31,349	-0.5%	19,095	-2.2%
1987	31,513	-0.6%	19,530	-4.1%
1986	31,697	1.6%	20,355	-1.8%

1/ Includes pilots with ratings to fly helicopters only.

2/ Includes pilots with ratings to fly gliders only.

**TABLE 9**  
**ESTIMATED TOTAL PILOTS AND INSTRUMENT RATED PILOTS**  
**DECEMBER 31, 1986-1990**

Calendar Year	Total Number 1/	Instrument Rated Pilots	
		Number	Percent of Total
1990	574,208	297,073	51.7%
1989	557,466	282,804	50.7%
1988	557,103	273,804	49.1%
1987	553,637	266,122	48.1%
1986	558,845	262,388	47.0%

1/ Excludes student pilots.

**TABLE 10**  
**ESTIMATED ACTIVE PILOT CERTIFICATES HELD**  
**BY CATEGORY AND AGE GROUP OF HOLDER**  
**1990, 1989, AND 1986**

YEAR	Type of Pilot Certificates								
	Total Active Pilots			Student			Private		
	1990	1989	1986	1990	1989	1986	1990	1989	1986
Total	702,659	700,010	709,118	128,863	142,544	150,273	299,111	293,179	305,736
Age Group									
14-15	36	233	252	236	233	252	0	0	0
16-19	17,810	19,487	18,135	13,743	15,207	14,652	3,715	3,910	3,222
20-24	57,022	55,353	58,029	23,510	24,346	27,477	20,888	19,804	21,096
25-29	80,880	82,706	89,246	23,410	25,708	28,885	27,929	29,133	33,569
30-34	94,816	96,167	102,263	20,262	22,930	25,086	37,790	38,367	44,654
35-39	97,095	97,183	105,580	16,557	18,529	19,531	44,881	43,781	46,367
40-44	98,681	98,638	96,586	12,272	14,000	13,606	43,646	41,769	41,428
45-49	80,583	79,453	73,040	7,859	8,847	8,234	35,207	34,283	32,152
50-54	60,586	58,701	59,077	4,705	5,269	5,438	26,729	25,691	27,064
55-59	46,550	46,890	48,211	2,984	3,536	3,685	21,929	22,376	26,539
60 and over	68,600	65,199	58,699	3,325	3,939	3,427	36,397	34,065	29,645

YEAR	Type of Pilot Certificates								
	Commercial			Airline Transport			Helicopter (Only)		
	1990	1989	1986	1990	1989	1986	1990	1989	1986
Total	149,666	144,540	147,798	107,732	102,087	87,186	9,567	8,863	8,581
Age Group									
14-15	0	0	0	0	0	0	0	0	0
16-19	247	244	114	0	0	0	33	24	23
20-24	11,107	9,654	7,600	382	411	413	872	817	889
25-29	20,354	18,687	17,226	6,216	6,258	6,308	2,465	2,265	2,379
30-34	18,132	16,944	16,769	15,701	14,920	12,438	2,016	1,823	1,672
35-39	16,040	15,924	20,169	16,992	16,112	15,933	1,297	1,252	1,779
40-44	19,546	20,277	23,661	20,167	19,490	15,437	1,671	1,629	1,118
45-49	18,518	18,365	18,000	17,378	16,331	13,409	717	638	418
50-54	14,077	13,783	14,947	14,123	13,074	10,819	311	260	173
55-59	11,623	11,529	10,816	9,389	8,784	6,398	109	88	81
60 and over	20,022	19,133	18,496	7,384	6,707	6,031	76	67	49

YEAR	Type of Pilot Certificates								
	Glider (Only) 1/			Recreational			Flight Instructor 2/		
	1990	1989	1986	1990	1989	1986	1990	1989	1986
Total	7,833	7,708	8,411	87	N/A	N/A	63,775	61,472	57,355
Age Group									
14-15	0	0	0	0			0	0	0
16-19	72	91	105	0			87	66	48
20-24	260	286	518	3			5,258	4,649	4,033
25-29	495	548	741	11			8,879	8,062	7,700
30-34	899	983	1,397	16			8,493	8,252	8,301
35-39	1,313	1,314	1,495	15			8,372	8,282	8,978
40-44	1,369	1,253	1,137	10			9,102	9,251	8,633
45-49	897	844	737	7			7,627	7,470	6,275
50-54	634	591	582	7			5,715	5,529	4,984
55-59	510	539	665	6			4,262	4,196	3,469
60 and over	1,384	1,259	1,034	12			5,980	5,715	4,934

1/ Glider pilots are not required to have a medical examination; however, totals above represent pilots who received a medical examination.

2/ Not included in total active pilots.

TABLE II  
AVERAGE AGE OF ACTIVE PILOTS BY CATEGORY

CALENDAR YEAR	TOTAL 1/	STUDENT	PRIVATE	COMMERCIAL	AIRLINE TRANSPORT
1981	37.8	30.7	39.3	40.7	42.0
1982	38.3	31.2	39.5	41.0	42.3
1983	38.8	31.7	40.0	41.5	42.5
1984	39.2	32.1	40.4	42.0	42.7
1985	39.5	32.4	40.8	42.4	42.8
1986	39.7	32.2	41.1	42.6	43
1987	39.9	32.3	41.4	42.7	43.1
1988	40.1	32.5	41.4	42.6	43.2
1989	40.2	32.7	41.8	42.5	43.4
1990	40.5	32.5	42.0	42.2	43.6

1/ Includes helicopter (only), glider (only), and recreational pilots not shown separately.

**TABLE 12**  
**ESTIMATED INSTRUMENT RATINGS HELD**  
**BY CLASS OF CERTIFICATES**  
**DECEMBER 31, 1990 AND 1989**

CLASS OF CERTIFICATE	1990	1989	% Change
<b>Total--All Pilots</b>	<b>297,073</b>	<b>282,804</b>	<b>5%</b>
<b>Private Pilots--Total</b>	<b>53,920</b>	<b>51,067</b>	<b>6%</b>
Private Airplane (only)	49,550	46,859	6%
Private Airplane, Private Glider	1,069	1,023	4%
Private Airplane, Commercial Glider	122	119	3%
Private Airplane, Private Helicopter	432	403	7%
Private Airplane, Private Glider, Private Helicopter	32	27	19%
Private Airplane, Commercial Helicopter	2,683	2,606	3%
Private Airplane, Private Gyroplane	5	5	0%
Private Airplane, Private Glider, Commercial Helicopter	16	12	33%
Private Airplane, Commercial Glider, Commercial Helicopter	10	12	-17%
Private Airplane, Other	1	1	0%
<b>Commercial Pilots--Total</b>	<b>129,426</b>	<b>123,908</b>	<b>4%</b>
Commercial Airplane (only)	110,719	105,402	5%
Commercial Airplane, Private Glider	1,825	1,783	2%
Commercial Airplane, Commercial Glider	3,141	3,037	3%
Commercial Airplane, Private Helicopter	307	282	9%
Commercial Airplane, Commercial Helicopter	12,716	12,708	0%
Commercial Airplane, Private Glider, Commercial Helicopter	145	136	7%
Commercial Airplane, Commercial Glider, Commercial Helicopter	496	488	2%
Commercial Airplane, Commercial Gyroplane	22	19	16%
Commercial Airplane, Commercial Helicopter, Commercial Gyroplane	17	16	6%
Commercial Airplane, Commercial Gyroplane, Commercial Glider	2	2	0%
Commercial Airplane, Commercial Glider, Private Helicopter	27	24	13%
Commercial Airplane, Commercial Gyroplane, Commercial Helicopter			
Commercial Glider	9	11	-18%
<b>Airline Transport Pilots--Total</b>	<b>107,732</b>	<b>102,087</b>	<b>6%</b>
Airline Transport Airplane (only)	105,830	100,317	5%
Airline Transport Airplane, Airline Transport Helicopter	1,902	1,770	7%
<b>Rotorcraft Pilots--Total</b>	<b>5,995</b>	<b>5,742</b>	<b>4%</b>
Commercial Helicopter	5,923	5,660	5%
Airline Transport Helicopter	62	71	-13%
Other	10	11	-9%



**TABLE 13**  
**ESTIMATED INSTRUMENT RATINGS HELD,**  
**BY CLASS OF CERTIFICATES, BY FAA REGION**  
**DECEMBER 31, 1990**

Class of Certificate	Total 1/	Alaskan	Central	Eastern	Great Lakes	New England	Northwest Mountain	Southern	Southwest	Western-Pacific	Outside U.S. 2/
<b>Total--All Pilots</b>	<b>297,073</b>	<b>3,610</b>	<b>13,062</b>	<b>37,904</b>	<b>44,034</b>	<b>13,036</b>	<b>27,110</b>	<b>57,676</b>	<b>36,516</b>	<b>49,700</b>	<b>14,425</b>
<b>Private Pilots--Total</b>	<b>53,920</b>	<b>368</b>	<b>2,994</b>	<b>7,537</b>	<b>10,350</b>	<b>2,731</b>	<b>4,218</b>	<b>9,323</b>	<b>5,939</b>	<b>9,929</b>	<b>531</b>
Private Airplane (only)	49,550	302	2,785	6,857	9,819	2,538	3,829	8,328	5,423	9,187	482
Private Airplane, Private Glider	1,069	4	31	172	167	59	75	180	107	266	8
Private Airplane, Commercial Glider	122	2	4	18	15	17	20	9	14	22	1
Private Airplane, Private Helicopter	432	1	21	67	51	30	40	77	54	35	6
Private Airplane, Private Glider, Private Helicopter	32	0	0	6	5	2	3	3	4	8	1
Private Airplane, Commercial Helicopter	2,683	59	150	413	286	83	248	719	335	350	32
Private Airplane, Private Gyroplane	5	0	2	0	2	1	0	0	0	0	0
Private Airplane, Private Glider, Commercial Helicopter	16	0	1	3	3	1	3	3	1	1	0
Private Airplane, Commercial Glider, Commercial Helicopter	10	0	0	1	1	0	0	4	1	2	1
Private Airplane, Other	1	0	0	0	1	0	0	0	0	0	0
<b>Commercial Pilots--Total</b>	<b>129,426</b>	<b>2,056</b>	<b>6,049</b>	<b>16,681</b>	<b>19,488</b>	<b>5,320</b>	<b>11,804</b>	<b>23,974</b>	<b>15,992</b>	<b>21,344</b>	<b>6,718</b>
Commercial Airplane (only)	110,719	1,783	5,313	13,970	17,392	4,574	9,998	19,787	13,675	17,816	6,411
Commercial Airplane, Private Glider	1,825	23	80	286	261	70	196	334	189	369	17
Commercial Airplane, Commercial Glider	3,141	26	114	470	434	188	365	511	341	655	37
Commercial Airplane, Private Helicopter	307	4	9	48	47	14	28	51	31	63	12
Commercial Airplane, Commercial Helicopter	12,716	209	505	1,791	1,275	434	1,140	3,165	1,683	2,288	226
Commercial Airplane, Private Glider, Commercial Helicopter	145	2	5	25	20	11	14	29	13	21	5
Commercial Airplane, Commercial Glider, Commercial Helicopter	496	7	19	84	45	27	54	89	53	112	6
Commercial Airplane, Commercial Gyroplane	22	1	1	1	6	2	4	2	3	2	0
Commercial Airplane, Commercial Helicopter, Commercial Gyroplane	17	1	1	0	3	0	3	2	0	5	2
Commercial Airplane, Commercial Gyroplane, Commercial Glider	2	0	1	0	0	0	0	0	0	1	0
Commercial Airplane, Commercial Glider, Private Helicopter	27	0	0	6	4	0	1	2	3	9	2
Commercial Airplane, Commercial Gyroplane, Commercial Helicopter, Commercial Glider	9	0	1	0	1	0	1	2	1	3	0
<b>Airline Transport Pilots--Total</b>	<b>107,732</b>	<b>1,097</b>	<b>3,744</b>	<b>12,659</b>	<b>13,623</b>	<b>4,757</b>	<b>10,673</b>	<b>22,549</b>	<b>13,795</b>	<b>17,758</b>	<b>7,077</b>
Airline Transport Airplane (only)	105,830	1,049	3,704	12,313	13,454	4,643	10,512	22,163	13,490	17,479	7,023
Airline Transport Airplane, Airline Transport Helicopter	1,902	48	40	346	169	114	161	386	305	279	54
<b>Rotorcraft Pilots (only)--Total</b>	<b>5,995</b>	<b>89</b>	<b>275</b>	<b>1,027</b>	<b>573</b>	<b>228</b>	<b>415</b>	<b>1,830</b>	<b>790</b>	<b>669</b>	<b>99</b>
Commercial Helicopter	5,923	88	274	1,019	565	222	408	1,816	772	663	96
Airline Transport Helicopter	62	1	1	7	8	4	7	11	15	5	3
Other	10	0	0	1	0	2	0	3	3	1	0

1/ Includes Outside U.S. total.

2/ Outside U.S. includes airmen certificated by FAA who live outside the 50 states or foreign countries

## **II. ACTIVE NONPILOT CERTIFICATES HELD**

**TABLE 14**  
**ESTIMATED ACTIVE NONPILOT AIRMEN CERTIFICATES HELD,**  
**BY FAA REGION AND STATE**  
**DECEMBER 31, 1990 1/**

FAA Region and State	Total Nonpilot Airmen	Mechanic	Parachute Rigger	Ground Instructor	Dispatcher	Flight Navigator	Flight Engineer
<b>Total 2/</b>	<b>492,237</b>	<b>344,282</b>	<b>10,094</b>	<b>66,882</b>	<b>11,002</b>	<b>1,290</b>	<b>58,687</b>
<b>United States--Total</b>	<b>469,832</b>	<b>329,084</b>	<b>9,912</b>	<b>65,008</b>	<b>8,922</b>	<b>1,217</b>	<b>55,689</b>
<b>Alaskan Region--Total</b>	<b>4,957</b>	<b>3,432</b>	<b>159</b>	<b>771</b>	<b>194</b>	<b>6</b>	<b>395</b>
<b>Central Region--Total</b>	<b>23,803</b>	<b>18,424</b>	<b>441</b>	<b>3,273</b>	<b>163</b>	<b>9</b>	<b>1,493</b>
Iowa	2,939	2,182	92	539	9	0	117
Kansas	6,526	5,059	113	965	42	2	345
Missouri	12,310	9,688	167	1,430	107	4	914
Nebraska	2,028	1,495	69	339	5	3	117
<b>Eastern Region--Total</b>	<b>67,893</b>	<b>48,799</b>	<b>1,697</b>	<b>9,091</b>	<b>2,121</b>	<b>205</b>	<b>5,980</b>
Delaware	1,295	938	28	157	16	5	151
District of Columbia	339	205	22	79	16	0	17
Maryland	4,519	2,749	147	872	67	10	674
New Jersey	11,394	8,056	235	1,402	356	53	1,292
New York	25,630	20,276	400	2,671	1,153	57	1,079
Pennsylvania	16,003	11,646	364	2,287	352	43	1,311
Virginia	7,635	4,189	453	1,397	155	37	1,404
West Virginia	1,072	740	48	226	6	0	52
<b>Great Lakes Region--Total</b>	<b>63,821</b>	<b>43,957</b>	<b>1,254</b>	<b>10,420</b>	<b>1,122</b>	<b>35</b>	<b>7,033</b>
Illinois	17,039	11,227	279	2,664	351	14	2,504
Indiana	6,390	4,533	194	1,024	74	4	561
Michigan	10,181	7,207	190	1,944	113	5	722
Minnesota	11,301	7,658	139	1,320	386	2	1,796
North Dakota	1,031	807	26	158	2	0	38
Ohio	11,813	8,401	269	2,143	132	5	863
South Dakota	1,056	732	24	220	2	1	77
Wisconsin	5,010	3,392	133	947	62	4	472
<b>New England Region--Total</b>	<b>20,101</b>	<b>13,794</b>	<b>362</b>	<b>2,878</b>	<b>281</b>	<b>146</b>	<b>2,640</b>
Connecticut	6,077	3,993	82	800	85	98	1,019
Maine	1,445	941	46	253	31	8	166
Massachusetts	8,799	5,804	170	1,127	102	10	586
New Hampshire	2,208	1,042	35	386	34	23	688
Rhode Island	873	589	19	166	13	3	83
Vermont	699	425	10	146	16	4	98

**TABLE 14**  
**ESTIMATED ACTIVE NONPILOT AIRMEN CERTIFICATES HELD,**  
**BY FAA REGION AND STATE**  
**DECEMBER 31, 1990 1/**

FAA Region and State	Total Nonpilot Airmen	Mechanic	Parachute Rigger	Ground Instructor	Dispatcher	Flight Navigator	Flight Engineer
<b>Northwest Mountain Region--Total</b>	<b>42,319</b>	<b>27,152</b>	<b>1,365</b>	<b>6,140</b>	<b>569</b>	<b>139</b>	<b>6,954</b>
Colorado	12,929	7,826	165	1,992	220	26	2,700
Idaho	1,822	1,205	168	311	12	4	122
Montana	2,096	1,379	286	352	5	3	111
Oregon	4,543	3,155	247	750	46	27	318
Utah	3,296	2,027	82	454	24	5	704
Washington	16,525	10,771	384	2,121	252	72	2,925
Wyoming	1,108	829	33	160	10	2	74
<b>Southern Region--Total</b>	<b>88,033</b>	<b>58,421</b>	<b>1,934</b>	<b>11,736</b>	<b>2,070</b>	<b>234</b>	<b>13,638</b>
Alabama	6,278	5,003	132	909	13	7	214
Florida	39,899	27,252	579	5,311	1,216	187	5,354
Georgia	17,968	11,741	289	1,614	331	9	3,984
Kentucky	3,395	1,964	161	531	110	1	628
Mississippi	1,928	1,340	48	375	11	3	151
North Carolina	8,304	4,999	459	1,285	143	15	1,403
South Carolina	3,226	2,106	94	588	25	2	411
Tennessee	7,035	4,016	172	1,123	221	10	1,493
<b>Southwest Region--Total</b>	<b>65,876</b>	<b>47,518</b>	<b>1,023</b>	<b>8,754</b>	<b>886</b>	<b>75</b>	<b>7,620</b>
Arkansas	2,687	1,943	72	470	19	1	182
Louisiana	4,999	3,800	91	668	48	6	386
New Mexico	2,407	1,624	72	536	27	4	144
Oklahoma	15,021	13,028	164	1,396	31	6	396
Texas	40,762	27,123	624	5,684	761	58	6,512
<b>Western-Pacific Region--Total</b>	<b>93,029</b>	<b>67,587</b>	<b>1,677</b>	<b>11,945</b>	<b>1,516</b>	<b>368</b>	<b>9,936</b>
Arizona	10,504	7,388	195	1,722	251	20	928
California	76,104	56,015	1,366	9,275	1,072	287	8,089
Hawaii	3,306	2,402	55	384	144	8	313
Nevada	3,115	1,782	61	564	49	53	606
<b>Outside U. S. --Total 3/</b>	<b>22,405</b>	<b>15,198</b>	<b>182</b>	<b>1,874</b>	<b>2,080</b>	<b>73</b>	<b>2,998</b>
<b>Other U. S. Areas:</b>	<b>1,677</b>	<b>1,243</b>	<b>37</b>	<b>209</b>	<b>70</b>	<b>1</b>	<b>117</b>
American Samoa	13	9	0	3	0	0	1
Canal Zone	39	14	18	3	2	0	2
Guam	214	113	3	26	8	0	64
Puerto Rico	1,259	996	13	151	57	1	41
Virgin Island	143	102	3	26	3	0	9
Wake Island	9	9	0	0	0	0	0

1/ Data for flight engineers and flight navigators represent total active ratings held. Data for dispatchers, mechanics, parachute riggers and ground instructors represent total ratings issued to date. These ratings retain their validity.

2/ Includes Outside U. S.

3/ Outside U.S. includes Other U.S. Areas outside of the 50 states and foreign countries.

**TABLE 15**  
**ESTIMATED ACTIVE WOMEN NONPILOT CERTIFICATES HELD,**  
**BY FAA REGION AND STATE**  
**DECEMBER 31, 1990 1/**

FAA Region and State	Total Nonpilot Airmen	Mechanic	Parachute Rigger	Ground Instructor	Dispatcher	Flight Navigator	Flight Engineer
<b>Total 2/</b>	<b>9,557</b>	<b>3,333</b>	<b>474</b>	<b>3,760</b>	<b>802</b>	<b>0</b>	<b>1,188</b>
<b>United States--Total</b>	<b>9,398</b>	<b>3,315</b>	<b>466</b>	<b>3,685</b>	<b>767</b>	<b>0</b>	<b>1,165</b>
<b>Alaskan Region--Total</b>	<b>156</b>	<b>37</b>	<b>11</b>	<b>52</b>	<b>46</b>	<b>0</b>	<b>10</b>
<b>Central Region--Total</b>	<b>421</b>	<b>205</b>	<b>18</b>	<b>162</b>	<b>7</b>	<b>0</b>	<b>29</b>
Iowa	83	45	2	33	2	0	1
Kansas	139	76	6	50	0	0	7
Missouri	161	72	7	59	5	0	18
Nebraska	38	12	3	20	0	0	3
<b>Eastern Region--Total</b>	<b>1,187</b>	<b>281</b>	<b>93</b>	<b>497</b>	<b>171</b>	<b>0</b>	<b>145</b>
Delaware	28	12	2	8	2	0	4
District of Columbia	12	0	2	5	1	0	4
Maryland	100	14	4	54	8	0	20
New Jersey	161	40	7	59	32	0	23
New York	395	109	18	156	81	0	31
Pennsylvania	283	59	27	126	40	0	31
Virginia	184	31	33	82	6	0	32
West Virginia	24	16	0	7	1	0	0
<b>Great Lakes Region--Total</b>	<b>1,511</b>	<b>532</b>	<b>63</b>	<b>619</b>	<b>116</b>	<b>0</b>	<b>181</b>
Illinois	441	151	16	168	27	0	79
Indiana	155	34	19	63	12	0	27
Michigan	249	79	7	133	13	0	17
Minnesota	205	80	4	51	38	0	32
North Dakota	9	1	0	8	0	0	0
Ohio	310	150	12	121	15	0	12
South Dakota	21	5	0	16	0	0	0
Wisconsin	121	32	5	59	11	0	14
<b>New England Region--Total</b>	<b>405</b>	<b>129</b>	<b>18</b>	<b>176</b>	<b>24</b>	<b>0</b>	<b>58</b>
Connecticut	142	54	4	48	11	0	25
Maine	35	7	1	16	3	0	8
Massachusetts	149	45	9	75	7	0	13
New Hampshire	50	17	3	19	2	0	9
Rhode Island	16	4	0	9	1	0	2
Vermont	13	2	1	9	0	0	1

**TABLE 15**  
**ESTIMATED ACTIVE WOMEN NONPILOT CERTIFICATES HELD,**  
**BY FAA REGION AND STATE**  
**DECEMBER 31, 1990 1/**

FAA Region and State	Total Nonpilot Airmen	Mechanic	Parachute Rigger	Ground Instructor	Dispatcher	Flight Navigator	Flight Engineer
<b>Northwest Mountain Region--Total</b>	<b>936</b>	<b>333</b>	<b>31</b>	<b>356</b>	<b>47</b>	<b>0</b>	<b>169</b>
Colorado	320	101	1	119	15	0	84
Idaho	33	10	2	17	3	0	1
Montana	38	7	5	23	1	0	2
Oregon	97	23	10	56	3	0	5
Utah	64	19	6	25	3	0	11
Washington	360	165	5	106	20	0	64
Wyoming	24	8	2	10	2	0	2
<b>Southern Region--Total</b>	<b>1,684</b>	<b>493</b>	<b>127</b>	<b>660</b>	<b>153</b>	<b>0</b>	<b>251</b>
Alabama	150	49	7	92	1	0	1
Florida	714	236	20	272	89	0	97
Georgia	197	75	11	63	12	0	36
Kentucky	117	26	9	39	18	0	25
Mississippi	36	10	2	20	1	0	3
North Carolina	190	37	40	80	8	0	25
South Carolina	69	21	4	31	3	0	10
Tennessee	211	39	34	63	21	0	54
<b>Southwest Region--Total</b>	<b>1,219</b>	<b>504</b>	<b>49</b>	<b>475</b>	<b>83</b>	<b>0</b>	<b>108</b>
Arkansas	38	13	0	20	1	0	4
Louisiana	98	48	2	38	8	0	2
New Mexico	75	23	3	41	2	0	6
Oklahoma	247	149	8	82	2	0	6
Texas	761	271	36	294	70	0	90
<b>Western-Pacific Region--Total</b>	<b>1,879</b>	<b>801</b>	<b>56</b>	<b>688</b>	<b>120</b>	<b>0</b>	<b>214</b>
Arizona	243	86	6	102	24	0	25
California	1,521	691	48	535	74	0	173
Hawaii	68	12	0	30	16	0	10
Nevada	47	12	2	21	6	0	6
<b>Outside U. S. --Total 3/</b>	<b>153</b>	<b>18</b>	<b>8</b>	<b>75</b>	<b>35</b>	<b>0</b>	<b>23</b>
<b>Other U. S. Areas:</b>	<b>21</b>	<b>7</b>	<b>0</b>	<b>9</b>	<b>1</b>	<b>0</b>	<b>4</b>
American Samoa	0	0	0	0	0	0	0
Canal Zone	0	0	0	0	0	0	0
Guam	5	1	0	1	0	0	3
Puerto Rico	11	4	0	6	1	0	0
Virgin Island	5	2	0	2	0	0	1
Wake Island	0	0	0	0	0	0	0

1/ Data for flight engineers and flight navigators represent total active ratings held. Data for dispatchers, mechanics, parachute riggers and ground instructors represent total ratings issued to date. These ratings retain their validity.

2/ Includes Outside U. S.

3/ Outside U.S. includes Other U.S. Areas outside of the 50 states and foreign countries.

### **III. PILOT CERTFICATES ISSUED**

**TABLE 16**  
**PILOT CERTIFICATES ISSUED, BY CATEGORY**  
**CALENDAR YEARS 1986-1990**

	1986		1987		1988		1989		1990	
Category of Certificates	Original	Additional	Original	Additional	Original	Additional	Original	Additional	Original	Additional
<b>Pilot--Total</b>	<b>141,625</b>	<b>32,628</b>	<b>149,640</b>	<b>39,990</b>	<b>148,018</b>	<b>37,921</b>	<b>146,951</b>	<b>46,990</b>	<b>156,955</b>	<b>45,730</b>
Student	88,699	0	85,611	0	86,193	0	87,427	0	88,586	0
Private	34,816	12,672	42,278	16,302	39,900	15,800	35,360	22,240	41,749	19,299
Commercial	8,863	9,241	11,314	11,365	12,042	10,597	13,753	11,778	15,500	12,584
Airline Transport	6,498	10,372	7,678	11,956	7,461	11,209	7,829	12,698	8,013	13,540
Helicopter (only)	2,209	234	2,217	293	1,947	287	2,240	252	2,700	266
Glider (only)	514	109	542	74	475	28	336	22	378	41
Recreational	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	29	0
<b>Nonpilot--Total r/</b>	<b>16,470</b>	<b>5,010</b>	<b>21,878</b>	<b>5,486</b>	<b>21,064</b>	<b>6,107</b>	<b>23,078</b>	<b>7,688</b>	<b>27,113</b>	<b>8,387</b>
Mechanic	10,998	3,289	15,089	4,195	14,907	4,353	15,923	5,728	19,861	6,381
Parachute Rigger	149	11	194	11	142	8	167	21	227	12
Ground Instructor	1,386	323	1,825	366	1,716	334	2,133	399	2,664	434
Dispatcher	516	1	533	3	510	2	431	5	550	2
Flight Navigator	17	0	4	0	17	0	14	0	1	1
Flight Engineer	3,404	1,386	4,233	911	3,772	1,410	4,410	1,535	3,810	1,557
Flight Instructor										
Certificates 1/	4,628	5,421	6,327	6,378	4,898	5,234	5,365	7,532	7,071	8,517
Instrument Ratings 2/	0	13,688	0	18,296	0	16,810	0	20,911	0	22,528

r/ Revised 1986-1988.

N/A Not Available.

Note: Additional ratings are entered on current airman certificates as follows:

Private, commercial, and airline transport pilot--aircraft category, class, and type instrument rating.

Helicopter pilot--instrument and type ratings.

Flight instructor--ratings for each aircraft category in which the holder is qualified, and for instrument flying instructions.

Mechanic--airframe and powerplant ratings.

Parachute rigger--senior or master rigger--senior or master rigger ratings.

Ground instructor--ratings for each subject in which the holder is qualified to give instruction.

1/ Not included in total.

2/ Special ratings shown on pilot certificates represented above; not included in total.



**TABLE 17**  
**PILOT CERTIFICATES ISSUED, BY CATEGORY AND CONDUCTOR**  
**(DECEMBER 31, 1990)**

Category of Certificates	Total Ratings Issued	Original Issuances				Additional Ratings			
		Total	Examiner	Inspector	No Test	Total	Examiner	Inspector	No Test
<b>Pilot--Total</b>	<b>202,685</b>	<b>156,955</b>	<b>55,385</b>	<b>89,389</b>	<b>12,181</b>	<b>45,730</b>	<b>40,206</b>	<b>1,631</b>	<b>3,893</b>
Student	88,586	88,586	0	88,586	0	0	0	0	0
Private	61,048	41,749	34,896	97	6,756	19,299	18,181	63	1,055
Commercial	28,084	15,500	11,655	89	3,756	12,584	10,747	93	1,744
Airline Transport	21,553	8,013	7,029	549	435	13,540	11,039	1,461	1,040
Helicopter (only)	2,966	2,700	1,439	58	1,203	266	206	12	48
Glider (only)	419	378	338	9	31	41	33	2	6
Recreational	29	29	28	1	0	0	0	0	0
<b>Nonpilot--Total r/</b>	<b>35,500</b>	<b>27,113</b>	<b>20,536</b>	<b>401</b>	<b>6,176</b>	<b>8,387</b>	<b>5,238</b>	<b>33</b>	<b>3,116</b>
Mechanic	26,242	19,861	16,781	49	3,031	6,381	4,741	11	1,629
Parachute Rigger	239	227	135	21	71	12	6	0	6
Ground Instructor	3,098	2,664	286	43	2,335	434	45	13	376
Dispatcher	552	550	359	67	124	2	1	1	0
Flight Navigator	2	1	0	0	1	1	0	0	1
Flight Engineer	5,367	3,810	2,975	221	614	1,557	445	8	1,104
Flight Instructor									
Certificates *	7,071	7,071	5,105	1,752	214	0	8,139	318	60

(P) Preliminary

Note: Excludes Renewals

Note: Additional ratings are entered on current airman certificates as follows:

Private, commercial, and airline transport pilot--aircraft category, class, and type instrument rating.

Helicopter pilot--instrument and type ratings.

Flight instructor--ratings for each aircraft category in which the holder is qualified, and for instrument flying instructions.

Mechanic--airframe and powerplant ratings.

Parachute rigger--senior or master rigger--senior or master rigger ratings.

Ground instructor--ratings for each subject in which the holder is qualified to give instruction.

\* Special ratings shown on pilot certificates represented above; not included in total.

**TABLE 18**  
**INSTRUMENT RATINGS ISSUED:**  
**1990, 1989, AND 1986**

Class of Certificate	1990	1989	1986	Percent Change 1990-1989
<b>Total--All Pilots</b>	<b>22,528</b>	<b>20,911</b>	<b>13,688</b>	<b>8%</b>
<b>Private Pilots--Total</b>	<b>13,065</b>	<b>11,681</b>	<b>8,355</b>	<b>12%</b>
Private Airplane (only)	11,848	10,554	7,840	12%
Private Airplane, Private Glider	111	93	95	19%
Private Airplane, Commercial Glider	15	18	1	-17%
Private Airplane, Private Helicopter	36	38	29	-5%
Private Airplane, Private Glider, Private Helicopter	1	3	1	--
Private Airplane, Commercial Helicopter	309	293	178	5%
Private Airplane, Other	745	682	211	9%
<b>Commercial Pilots--Total</b>	<b>8,338</b>	<b>8,091</b>	<b>4,183</b>	<b>3%</b>
Commercial Airplane (only)	7,408	7,122	3,437	4%
Commercial Airplane, Private Glider	54	54	31	0%
Commercial Airplane, Commercial Glider	66	54	31	22%
Commercial Airplane, Private Helicopter	12	12	5	0%
Commercial Airplane, Commercial Helicopter	788	843	666	-7%
Commercial Airplane, Private Glider, Commercial Helicopter	4	3	3	33%
Commercial Airplane, Commercial Glider, Commercial Helic	4	1	9	300%
Commercial Airplane, Other	2	2	1	0%
<b>Rotorcraft Pilots--Total</b>	<b>1,125</b>	<b>1,139</b>	<b>1,150</b>	<b>-1%</b>
Commercial Helicopter	1,097	1,113	1,145	-1%
Commercial Helicopter, Airline Transport Helicopter	20	17	0	18%
Commercial Helicopter, Private Glider	1	0	1	--
Commercial Helicopter, Other	7	9	4	-22%

**TABLE 19**  
**STUDENT CERTIFICATES ISSUED, BY MONTH:**  
**1986 - 1990**

YEAR	1986	1987	1988	1989	1990
<b>TOTAL</b>	<b>88,706</b>	<b>85,661</b>	<b>82,110</b>	<b>87,427</b>	<b>88,586</b>
<b>January</b>	6,641	6,098	5,410	7,789	6,699
<b>February</b>	5,590	6,543	6,157	7,156	6,266
<b>March</b>	6,472	7,125	7,133	6,833	7,372
<b>April</b>	7,488	7,139	6,606	6,059	7,044
<b>May</b>	7,415	6,164	7,014	6,870	7,604
<b>June</b>	8,211	8,491	8,539	8,675	8,284
<b>July</b>	9,648	8,973	7,796	8,305	9,037
<b>August</b>	8,886	8,389	8,981	8,976	9,155
<b>September</b>	8,961	8,109	7,624	8,080	7,509
<b>October</b>	8,133	7,585	7,133	7,616	8,103
<b>November</b>	5,809	5,912	6,086	6,203	6,551
<b>December</b>	5,452	5,133	3,631	4,865	4,962